

PATENT COOPERATION TREATY

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From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:

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PCT

NOTIFICATION OF TRANSMITTAL OF INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Rule 71.1)

Date of mailing (day/month/year) 19.05.2004	
Applicant's or agent's file reference 62557	IMPORTANT NOTIFICATION
International application No. PCT/EP 03/50297	International filing date (day/month/year) 09.07.2003
Priority date (day/month/year) 06.08.2002	
Applicant THALES et al.	



1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.
4. REMINDER

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

The Applicant's attention is drawn to Article 33(5), which provides that the criteria of novelty, inventive step and industrial applicability described in Article 33(2) to (4) merely serve the purpose of international preliminary examination and that "any Contracting State may apply additional or different criteria for the purpose of deciding whether, in that State, the claimed invention is patentable or not" (see also Article 27(5)). Such additional criteria may relate, for example, to exemptions from patentability, requirements for enabling disclosure, clarity and support for the claims.

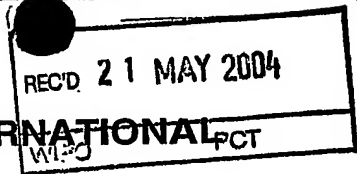
<p>Name and mailing address of the IPEA/</p>  <p>European Patent Office D-80298 Munich Tel. +49 89 2399 - 0, Tx: 523656 epmu d Fax: +49 89 2399 - 4465</p>	<p>Authorized officer:</p> <p>Weman, E</p>  <p>Tel. +49 89 2399-7961</p>
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TRAITE DE COOPERATION EN MATIERE DE BREVETS

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RAPPORT D'EXAMEN PRELIMINAIRE INTERNATIONAL

(article 36 et règle 70 du PCT)





Référence du dossier du déposant ou du mandataire	POUR SUITE A DONNER voir la notification de transmission du rapport d'examen préliminaire International (formulaire PCT/PEA/416)	
Demande internationale No. PCT/EP 03/50297	Date du dépôt international (jour/mois/année) 09.07.2003	Date de priorité (jour/mois/année) 06.08.2002
Classification internationale des brevets (CIB) ou à la fois classification nationale et CIB G01S15/B9		
Déposant THALES et al.		

1. Le présent rapport d'examen préliminaire international, établi par l'administration chargée de l'examen préliminaire international, est transmis au déposant conformément à l'article 36.
2. Ce RAPPORT comprend 4 feuilles, y compris la présente feuille de couverture.
 - ☐ Il est accompagné d'ANNEXES, c'est-à-dire de feuilles de la description, des revendications ou des dessins qui ont été modifiées et qui servent de base au présent rapport ou de feuilles contenant des rectifications faites auprès de l'administration chargée de l'examen préliminaire international (voir la règle 70.16 et l'instruction 607 des Instructions administratives du PCT).

Ces annexes comprennent feuilles.

3. Le présent rapport contient des indications et les pages correspondantes relatives aux points suivants :

- I ☒ Base de l'opinion
- II ☐ Priorité
- III ☐ Absence de formulation d'opinion quant à la nouveauté, l'activité inventive et la possibilité d'application industrielle
- IV ☐ Absence d'unité de l'invention
- V ☒ Déclaration motivée selon la règle 66.2(a)(ii) quant à la nouveauté, l'activité inventive et la possibilité d'application industrielle; citations et explications à l'appui de cette déclaration
- VI ☐ Certains documents cités
- VII ☐ Irrégularités dans la demande internationale
- VIII ☐ Observations relatives à la demande internationale

Date de présentation de la demande d'examen préliminaire internationale 02.03.2004	Date d'achèvement du présent rapport 19.05.2004
Nom et adresse postale de l'administration chargée de l'examen préliminaire international  Office européen des brevets D-80298 Munich Tél. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Fonctionnaire autorisé Mercier, F N° de téléphone +49 89 2399-7454 

PCT/EP 03/50297

**RAPPORT D'EXAMEN
PRÉLIMINAIRE INTERNATIONAL**

Demande internationale n°

PCT/EP 03/50297

5. ☐ Le présent rapport a été formulé abstraction faite (de certaines) des modifications, qui ont été considérées comme allant au-delà de l'exposé de l'invention tel qu'il a été déposé, comme il est indiqué ci-après (règle 70.2(c)) :

(Toute feuille de remplacement comportant des modifications de cette nature doit être indiquée au point 1 et annexée au présent rapport.)

6. Observations complémentaires, le cas échéant :

V. Déclaration motivée selon l'article 35(2) quant à la nouveauté, l'activité inventive et la possibilité d'application industrielle; citations et explications à l'appui de cette déclaration

1. Déclaration Nouveauté	Oui:	Revendications	1-3
	Non:	Revendications	
Activité inventive	Oui:	Revendications	1-3
	Non:	Revendications	
Possibilité d'application industrielle	Oui:	Revendications	1-3
	Non:	Revendications	

2. Citations et explications

voir feuille séparée

**RAPPORT D'EXAMEN
PRELIMINAIRE INTERNATIONAL - FEUILLE SEPARÉE**

Demande internationale n° PCT/EP03/50297

RE Item V

1. Il est fait référence aux documents suivants:

D1: BILLON, XP010311671 cité dans la demande

D2: WO 99 18452 A cité dans la demande

D3: DOUGLAS, XP000623722

2. Il ne semble pas que l'état de la technique connu de l'art antérieur disponible justifie de soulever des objections au titre des articles 33(2) et 33(3) PCT à l'encontre de la présente demande.

3. l'invention concerne une antenne sonar synthétique et plus particulièrement l'autocalibration d'une telle antenne. Elle consiste à minimiser le nombre de capteurs de l'antenne de réception en fixant le pas réduit entre capteurs, imposé par la précision de l'autocalibration, uniquement aux deux extrémités voir à une seule extrémité de l'antenne. Ceci permet d'augmenter la précision de l'autocalibration avec un nombre de capteurs plus petit que dans l'art antérieur. L'art antérieur (D2 fig. 3, D3 fig. 2&3) ne cite que des antennes réseaux classiques ayant un pas inter-élément régulier et constant comme c'est aussi l'usage dans radar SAR.

4. Aucun des documents cités ne dévoilent ni ne suggèrent les caractéristiques de la revendication 1 qui répond donc aux critères de nouveauté et d'activité inventive (Art. 33(2) et 33(3) PCT).

Translation

10 Rec'd PCT/PTO 01 FEB 2005
PATENT COOPERATION TREATY

PCT/EP2003/050297



PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 62845	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/EP2003/050297	International filing date (day/month/year) 09 juillet 2003 (09.07.2003)	Priority date (day/month/year) 06 août 2002 (06.08.2002)
International Patent Classification (IPC) or national classification and IPC G01S 15/89, 7/52		
Applicant THALES		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of <u>4</u> sheets, including this cover sheet. <input type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT). These annexes consist of a total of _____ sheets.
3. This report contains indications relating to the following items: I <input checked="" type="checkbox"/> Basis of the report II <input type="checkbox"/> Priority III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability IV <input type="checkbox"/> Lack of unity of invention V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement VI <input type="checkbox"/> Certain documents cited VII <input type="checkbox"/> Certain defects in the international application VIII <input type="checkbox"/> Certain observations on the international application

Date of submission of the demand 02 mars 2004 (02.03.2004)	Date of completion of this report 19 May 2004 (19.05.2004)
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

2001/EP2003/050297

I. Basis of the report

1. With regard to the elements of the international application:*

- ☒ the international application as originally filed
- ☒ the description:
 pages _____ 1-5 _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☒ the claims:
 pages _____ 1-3 _____, as originally filed
 pages _____, as amended (together with any statement under Article 19
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☒ the drawings:
 pages _____ 1/1 _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☐ the sequence listing part of the description:
 pages _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item. These elements were available or furnished to this Authority in the following language _____ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/fig. _____

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PC 03/50297

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-3	YES
	Claims		NO
Inventive step (IS)	Claims	1-3	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-3	YES
	Claims		NO

2. Citations and explanations

1. Reference is made to the following documents:

D1: BILLON, XP010311671 (cited in the application);
D2: WO 99 18452 A (cited in the application);
D3: DOUGLAS, XP000623722.

2. The prior art known from the available documents does not appear to justify raising any objections with regard to the present application under the terms of PCT Article 33(2) and 33(3).

3. The invention relates to a synthetic sonar antenna and, more particularly, to the self-calibration of such an antenna. The invention consists in minimising the number of sensors in the receiving antenna by positioning the reduced pitch between the sensors, as required for the accuracy of self-calibration, only at either end of the antenna or even at only one end thereof. This enables the accuracy of self-calibration to be increased while using fewer sensors than in the prior art.

The prior art (D2, figure 3; D3, figures 2 and 3) only cites conventional network antennas that have a

uniform and constant pitch between the elements, as is also commonplace in SAR radars.

4. None of the cited documents discloses or suggests the features in claim 1 and, as a result, said claim fulfils the requirements of novelty and inventive step (PCT Article 33(2) and 33(3)).